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RESULTS OF THE ARCHBOLD EXPEDITIONS. NO. 20

ON SOME PASSERINE NEW GUINEA BIRDS

By A. L. RAND

I have already reported on some of the non-passerine birds collected by the 1936 New Guinea Expedition in south New Guinea (1937, Amer. Mus. Novit., No. 990) and the present paper deals with the more interesting of the passerine birds studied.

Three new subspecies are described from south New Guinea and one from southeast New Guinea.

***Pitta versicolor simillima* Gould**

Daru: 1 sex (?); June or July, 1936.

Wing: 120.

The only record for the New Guinea mainland is that of two specimens secured by D'Albertis on the Katau River in October and November. The present specimen compares well with a series from Cape York.

***Campochaera sloetii flaviceps* Salvadori**

Palmer River, two miles below its junction with the Black River: 2 ♂ ad.; July 12, 18.

Fly River, 30 miles above D'Albertis Junction: 2 ♂ ad., 1 ♀ ad.; August 9.

Wing: ♂ ad. 104, 105, 107, 109; ♀ ad. 107.

These birds appear identical with birds from the southern slopes of the Snow Mountains at 2000 feet (Meek coll.) which have wing measurements of ♂ 104, 107, ♀ 103, 105. There are also in the American Museum collection a male and female from Mt. Victoria, 4000-5000 ft., April-June, 1896, and another male and female from "British New Guinea." Two of these specimens are slightly paler than the Fly River birds, one, an adult female, is about as dark; the fourth is a skin from a spirit specimen. Wing measurements are ♂ 104, 111, ♀ 102, 103. Claude Grant (1915, Ibis, Jub. Sup., No. 2, p. 121) recorded that it was a bird of the tree tops, gave a clear whistle, and had the habits of a fly-catcher dashing out after passing insects and returning again to its perch.

I found this bird only on the upper Fly where it was fairly common. It was usually in small parties of three to six in number and kept in the tops of the tall trees. They usually stayed in the top of a tree for but a short time, calling and moving about, then flew some distance over the forest so that they were difficult to secure. Their calls were soft whistles, and melodious trills, frequently given while the birds were on the wing. The stomach contents of three birds consisted of fruits only.

***Crateroscelis murina pallida*, new subspecies**

TYPE.—No. 426456, Amer. Mus. Nat. Hist.; ♂ ad.; east bank Fly River, opposite Sturt Island; October 30, 1936; Richard Archbold, A. L. Rand, and G. H. H. Tate.

DIAGNOSIS.—The male differs from that of *murina* in the olive-brown instead of black top of the head, the lighter, more brownish back, and the much whiter underparts with the paler rufous restricted to the sides and a narrow line across the breast. It resembles *capitalis* Stres. and Pal. in lacking the black of the top of the head, but is even paler, has the back lighter and more brownish, and the underparts whiter.

WING: ♂ ad. 59, 59, 62, 62; (sex ?) 59.

DISTRIBUTION.—Known only from the middle Fly (Lake Daviumbu and Sturt Island).

REMARKS.—Specimens from the upper Fly River (Palmer Junction and Black River Camp) are *murina*; though the underparts have more white than in most *murina* from the rest of New Guinea, the males have the top of the head black.

***Gerygone fusca pallida* Finsch**

Daru: 1 ♂ ad.; March 9.

Wing, 60; tail, 43; bill, culmen from base, 13; exposed culmen, 9.5.

The present specimen is in breeding condition and in fairly fresh plumage.

This race has been known from only two immature specimens, both from western New Guinea (Lobo Bay and the Mimika River), and the present example provides an opportunity for discovering the characters of the adult of this race (assuming that birds from the Mimika River and from Daru are the same).

In Meise's grouping of the races in the formenkreis *Gerygone fusca* (1931, Nov. Zool, XXXVI, pp. 358-374) this specimen should be included in his *laevigaster* group which also includes *broomei*, *mastersi* and *laevigaster*. The white band on the under side of the base of the tail is only indicated by a pale area and the white of the forehead extending back on the sides as a line over the eye is well defined.

In the olive-brown color of the upperparts it is closest to *laevigaster* and agrees with it in the distribution of color of the tail but differs in being paler on the upperparts, in having the white on the forehead slightly wider, the underparts whiter and the larger wing and larger bill. From *mastersi* and *broomei* it differs in the browner upperparts, slightly wider white on the forehead, and the longer wing and larger bill.

***Acrocephalus arundinaceus australis* (Gould)**

Lake Daviumbu: 10 ♂ ad., 1 ♀ (?) ad.; August 20–September 13.

Wing: ♂ ad. 67, 67, 67, 68, 68, 68, 69, 70, 70.

The above series includes both very worn and freshly plumaged birds. In color the freshly plumaged birds average slightly darker on top of the head than East Australian specimens but are practically indistinguishable; the bill is about the same length. Birds from South Australia and New South Wales have a wing of 70–76, Queensland birds have an average slightly shorter wing 69–72, and the present New Guinea series average slightly shorter again 67–70. There is too much overlap to separate any of these populations. Hartert (1930, Nov. Zool., XXXVI, p. 88) was unable to separate two males (wing 69 and 73) taken at Anggi lakes, Arfak, from *australis*. The type of *cervinus* deVis is apparently unique. It came from southeast New Guinea and was said to have a wing of 80 mm.

At the inner end of the outlet from Lake Daviumbu, where the water was one to two fathoms deep, there were areas of lotus lilies, floating mats of rice grass and clumps of tall reeds rising ten feet and more above the water. Farther back from the lake were large impenetrable areas of these tall reeds. This was the chief habitat of this bird, in which it fed and nested, and here it was very common over a small area. I found also a few males singing in the clumps of bamboo near this part of the marsh; none was found elsewhere. Though the habitat of this species and of *Megalurus albo-limbatus* differs somewhat, both species were found only in this small area about the channel, and both were very common in it.

The males sang sitting up straight in the tops of the reeds but were very shy and at my approach dropped down into the reeds or flew some considerable distance over them. In the early morning their songs were heard everywhere. Apparently they fed low in the reeds.

On August 25, I collected a nest and saw two other similar nests which were probably of this species but were not positively identified.

The nest collected was placed about four feet above the water in the edge of a clump of reeds close by the open water of the channel. It was quite conspicuous and could be seen for some distance. It was placed among several upright reeds to the stems of which it was attached, by having strands carried around the stems and worked back into the nest. The nest was a deep, firm, rather tidy, cup-shaped structure composed largely of fine dead grasses and grass heads lacking the seeds, with many small bits of animal silk throughout, and with a considerable amount of root-lets from bases of reeds in the upper portion of the nest. This gave greater firmness to the rim and the portions carried around the reed stems for attachments. It was lined with fine dead grasses, some of them with the threshed-out seed heads attached. It measured: outside, 95 mm. deep \times 90 mm. wide; inside, 55 mm. deep \times 50 mm. across.

The nest contained two eggs. The two eggs are ovate in shape, shell smooth with a medium gloss, ground color whitish tinged bluish gray, irregularly marked with dots and flecks, and sparsely with spots and blotches of dark chocolate brown and much paler olive-brown, and secondary grays. One egg has more and larger blotches of pale brown, which color is perhaps caused by a dilution due to a thinner layer of the chocolate-brown pigment. In one egg the larger spots tend to form a wreath on the larger end; in the other they are more scattered. The eggs measure 20.8×14.3 and 20.3×14.3 .

The adult was very shy at this nest. After a long wait I saw it come to the nest through the reeds and start to brood, but when I attempted to collect it, it slipped away through the reeds again. And when I finally secured it I was not sure it was the bird which had left the nest as there were several of this species in the same small clumps of reeds. Another similar nest, undoubtedly of this species, was less than twenty yards away. One male, with enlarged testes had the left testis slightly larger than the right.

***Megalurus timoriensis muscalis*, new subspecies**

TYPE.—No. 426547, Amer. Mus. Nat. Hist., ♂ ad.; Lake Daviumbu, middle Fly; south New Guinea; September 9, 1936; Richard Archbold, A. L. Rand, and G. H. H. Tate.

DIAGNOSIS.—Very different from the other New Guinea races in its smaller size, duller less rufescent coloration, and the pronounced streaking in the crown; closest to the Australian bird but differs in the duller color of the crown with wider and more plentiful black streaks in it, in the more extensive black streakings of the back and these streaks being wider, and with paler edgings to them, in the heavier streaking of the upper tail-coverts, in the slightly paler underparts, and in the larger bill.

MEASUREMENTS OF MALES

	WING	BILL
Lake Daviumbu	62,63,63,63,64,66,67	16,16,16,16.5,16.5,16.5,16.5
Queensland	63,63,66,66	14,15,15,16
Northern Territory	61,63,65,66	14.5,15,15.5,16
Northwest Australia	61,63,65,66	14.5,15,15.5,16

DISTRIBUTION.—Known only from the grasslands of the middle Fly River.

REMARKS.—This was a resident, breeding population. Compared with these specimens the type of *melvillensis* is darker and more rufescent above, with the streaking in the crown obscure and the streaking of the back reduced.

This form was only found at Lake Daviumbu where it was fairly common in the dense grass of the *Banksia* savanna ridges. It was very shy and retiring. Sometimes a bird flushed, flew a short distance and dropped back into the grass. It did not perch on the tops of the grass but always sought secure shelter where I was unable to flush it again, though I could hear its little rattling scolding call.

Later the natives staged a wallaby drive and burned the grass from these ridges. This did not drive the warblers into the adjacent swamps as I expected, but concentrated them in the little patches and fringes of grass missed by the burning. They were conspicuous here, and perhaps confused, perching up in plain sight on the grass and in the trees but were wary, often flying before I could approach within gunshot. They were frequently in pairs and breeding, as the gonads of five September specimens indicated. On September 8, I saw one give a flight song, rising thirty feet above the ground, give its short song, then sink back into the grass. In flight the tail is carried more or less horizontal while the body is carried somewhat upright, giving a distinctive bend in the outline of the bird.

Megalurus albo-limbatus (D'Albertis and Salvadori)

Lake Daviumbu: 6 ♂ ad., 4 ♀ ad.; August 20–September 20.

	MALE	FEMALE
Wing	57,58,58,60,60,62	54,55,56,56
Tail	60,57,60,60,62,57	55,56,55,56
Culmen from base	17,17.5,18,18,18.5,17.5	17,15,17,17
Tarsus	23,22,24,23,23,23	—,20,20,21

The present series agrees well with the original description and Sharpe (1883, Cat. Birds Brit. Mus., VII, p. 129) has given a more detailed de-

scription. In freshly plumaged specimens however the white edgings all around the inner secondaries, which have given the species its name, are not pure white on their outer margins but strongly tinged buffy, the whiteness of most specimens being the result of wear and fading. In general color pattern this species is very similar to *timoriensis* but differs in the more slender and longer bill, the much shorter tail about equal to the wing in length, and the tail-feathers being broadly rounded at the tip. *M. gramineus* of Australia has the tail nearly as short proportionately, but the tail-feathers are more pointed, though not as much so as in *timoriensis*; it has streakings on the throat pronounced and has a much more slender, shorter, straighter bill.

This species has hitherto been known only from the three specimens collected by D'Albertis 430 miles up the Fly River, August 23-25, 1877.

On the inner end of the channel from the Fly River to Lake Daviumbu, where the clumps of reeds and masses of floating rice grass on the edge of the lake grew in from one to two fathoms of water and the area had to be explored by boat, I found this marsh warbler common. The ten specimens collected and the two nests found were all within two or three hundred yards of each other. Though common in this little area I saw it nowhere else in the extensive marshes explored. Evidently it needs a very special type of habitat. *Megalurus timoriensis* was not found in this habitat, being found only on the savanna ridges. This was a secretive bird, keeping low in the vegetation where it crept about, only occasionally venturing out into the more open stands of reeds or lotus lilies unless forced from a dense clump of grass by my approach. And yet, though liking dense cover, sometimes it was not shy, and when I was pushing the boat through a clump of reeds one or two of these occasionally came up within a few feet of the boat inquisitively inspecting me and giving their little chattering call. Their habit of keeping to the shelter of the vegetation made them difficult to secure, but they frequently gave a little rattling scolding call and when startled into flight these birds usually flew but a short distance and then perched on the top of some clump of vegetation where they could be seen.

The two nests found in August and September were both very similar globular structures with an opening on the side near the top. One nest collected was composed outside of very coarse, dead, dry grass blades and a few grass stems, and scantily lined with fine, threshed-out, grass heads that do not cover all the flat grass blades of the body of the nest. The entrance was untidy and irregular with projecting ends of grass blades and the grass heads of the lining. The entrance appeared smaller

than the size of the bird and in entering and leaving the loose projecting ends must be pushed aside by the bird. The nest measured outside about 130×180 mm. long, inside about 60×70 mm. high. The bottom of the nest was about 40 mm. thick. One nest was in a small patch of low floating rice grass with a few small reeds in it. This was in a mixed area of clumps of reeds, patches of rice grass, open stands of lotus lilies, and not far from open water. The nest itself was about two feet above the water, supported on all sides by dense grasses and woven about some of the stems. The vegetation so densely surrounded the nest as to effectually conceal it. Another similar nest was in a little islet of broad-bladed sedges ten feet across and twenty yards out in the lake from the edge of the marsh.

The first nest, collected August 25 contained 3 eggs; the second nest was ready for eggs on September 13. The eggs are broadly ovate in shape, the shell smooth with a medium gloss, ground color pinkish white, very heavily marked with small marks and specks of pinkish brown, many of the markings more or less over-laid with white to give secondary grays. These markings nearly obscure the ground color on the larger end of the egg and are heavily distributed over the rest of it.

They measure: 18.9×14.2 ; 19×14.1 ; 19.5×14.4 .

The nests were found by seeing the adult fly from them when the boat was within a few yards of the nest. The adults were very shy about the nest and I had to wait a long time for them to return.

***Malurus alboscapulatus dogwa* Mayr and Rand**

Tarara and Penzara: 5 ♂ ad., 1 ♂ imm., 3 ♀ ad., 1 (sex?); December 7–January 20, 1937.

Mabaduan: 2 ♂ ad.; April.

Gaima: 2 ♂ ad., 1 ♀ ad.; November 11–20.

Lake Daviumbu: 6 ♂ ad., 5 ♂ imm., 8 ♀ ad.; August 19–September 30.

Wing: ♂ ad. 43–47; ♀ ad. 42–46.

This well-marked race was hitherto known only from Dogwa and Wuroi on the Oriomo River. The present records extend its range from just east of the Morehead River, eastward to the east bank of the Fly River at its mouth, and inland to the grass country of the middle Fly River.

***Microeca flavovirescens flavovirescens* Gray**

Tarara: 2 ♂ ad., 1 ♂ imm., 1 ♀ ad.; December 27, 1936, January 4, 1937.

East bank Fly River opposite Sturt Island: 1 ♂ ad., 1 ♂ (?); October 12, 15.

Lake Daviumbu: 1 ♀ ad.; September 13.

Fly River, 30 miles above D'Albertis Junction: 1 ♂ ad.; August 10.

Fly River 5 miles below Palmer Junction: 1 ♀ ad.; June 3.

Wing: ♂ ad. 77, 77, 78, 80; ♀ ad. 71, 73, 73.

This series differs from specimens from the Setekwa River, Kubuna, and the rest of New Guinea in the less deep yellow underparts, the sides of the breast and abdomen being more grayish green, with the paler yellow more restricted to the middle of the breast and belly, more whitish throat, and the duller, more grayish-green upperparts. Two males from the Aru Islands, typical *flavovirescens*, agree well with the south New Guinea birds.

DeVis, 1897, Ibis, p. 384, described *Zosterops cuicui* from Boirave, southeast New Guinea. This description appears to refer to this species, and the name *cuicui* must be used for the brighter yellow bird inhabiting most of New Guinea.

***Monarcha trivirgatus* subspecies?**

Lake Daviumbu: 1 ♂ imm.; September 17.

Tarara: 1 ♂ (?) imm., 1 ♀ imm.; December 11.

Wing: ♂ imm. 74; ♂ (?) imm. 72; ♀ imm. 70.

This is the first record of this species for the mainland of New Guinea.

The three immature specimens have the upperpart darker slaty and the breast and flanks rufous, more richly colored than in six immature specimens of Cape York (*M. t. albiventris* Gould). For a discussion of the two Australian races see 1931 Emu, XXXI, pp. 1-5. Compared with four immature specimens of *gouldi* Gray from farther south on the Cape York peninsula the New Guinea birds are very similar, differing only in the slightly darker upperparts. It is advisable to wait for adult New Guinea material before attempting to separate them.

***Rhipidura rufidorsa rufidorsa* Meyer**

Fly River, 30 miles above D'Albertis Junction: 1 ♂ ad.; August 9.

Fly River, 5 miles below Palmer Junction: 2 ♂, 1 ♀; May 15, 25.

Palmer River, 2 miles below its junction with Black River: 3 ♂, 3 ♀, 1 (sex ?); June 7, July 8.

Wing: ♂ 65, 65, 65, 66, 66, 68; ♀ 60, 61, 62, 65.

This species ranges over the whole of New Guinea. In addition to the range given by Hartert et al. (1936, Mitt. Zool. Mus. Berlin, XXI, p. 181, abb. 2) it also occurs in the Fly River area and in the Hall Sound area of southeast New Guinea (see beyond).

Hartert (1930, Nov. Zool., XXXVI, p. 76) was unable to decide on the subspecific status of the various populations of this species, but with the present material available it appears that three races must be recognized, based chiefly on the differences in coloration of the back. They are:

kumusi Mathews. Known only from the Kumusi River, the type locality. Six specimens from the type locality are more brightly rufous on the back than any other New Guinea populations and must be considered as a distinct race representing one extreme in coloration of the species.

I have no material from north New Guinea.

rufidorsa Meyer. This race, as the present material shows, includes the Jobi, Misol, Berau Peninsula, Weyland Mts., southern Snow Mts. and upper Fly River populations. These populations are not all exactly like one another, but they are intermediate between the bright rufous *kumusi* and the very different, pale, dull, southeast New Guinea birds and most of the populations are quite distinct from either of them.

The Misol (4 specimens) and Jobi (7 specimens) birds are considerably darker, duller rufous than *kumusi*; Weyland Mts. (3 skins) birds, a series from the southern slopes of the Snow Mts. and the Setekwa River (*nova* of Mathews) are slightly darker than Jobi skins, and the Fly River series are slightly duller again. The birds from the Arfak Peninsula, however, are slightly brighter rufous than any other population I have included in *rufidorsa*, even approaching *kumusi* from which it may be distinguished by being slightly darker.

The pale rufous bird from the south coast of southeast New Guinea appears to be without a name and I describe it as follows.

***Rhipidura rufidorsa kubuna*, new subspecies**

TYPE.—No. 420457, Amer. Mus. Nat. Hist.; ♂ ad.; Kubuna, Central Division, Territory of Papua; December 3, 1933; Richard Archbold and A. L. Rand.

DIAGNOSIS.—The upperparts are dull and pale, much duller than *kumusi* and much paler than *rufidorsa*; the fore back tinged grayish and the rump and lower back paler.

MEASUREMENTS.—Wing: ♂ 64, 65, 66; ♀ 57, 60, 61.

DISTRIBUTION.—Probably the south coast of southeast New Guinea; specimens from Mafulu, 500 meters altitude, Kubuna, and Veimaui.

REMARKS.—A single specimen from Collingwood Bay is intermediate between this form and the bright rufous *kumusi*.

In this species the extremes in color between the subspecies occur in southeast New Guinea on opposite sides of the island. They intergrade through a comparatively short distance around the eastern end of the island, while intermediate populations (included in *rufidorsa*) occupy much larger areas around the western part of the island.

***Rhipidura hyperythra mülleri* Meyer**

Tarara, Wassi Kussa River: 2 ♂; January 4, 18, 1937.

Fly River, 30 miles above D'Albertis Junction: 1 ♂; 1 (sex ?); August 12, 1936.

Wing: ♂, 74, 77, 80.

This species is thus represented on both the upper and lower Fly River by the western race. The white in the outer web of the outer tail-feathers, measured along the shaft, is 9 and 10 mm. in extent in one upper Fly and one Wassi Kussa specimen.

***Myiolestes megarhynchus wuroi* Mayr and Rand**

Tarara and Penzara: 3 ♂ ad, 1 ♂ imm., 5 ♀ ad.; December 16–January 18.

Mabaduan: 2 ♂ ad.; April 23, 24.

Wing: ♂ ad. 92, 93, 95, 95, 98; ♀ ad. 87, 88, 88, 92.

This extends the range of this race westward to near the Morehead River.

***Myiolestes megarhynchus palmeri*, new subspecies**

TYPE.—No. 427259, Amer. Mus. Nat. Hist.; ♂ ad.; Palmer River, two miles below its junction with Black River, south New Guinea; July 18, 1936; Richard Archbold, A. L. Rand, and G. H. H. Tate.

DIAGNOSIS.—In the color of the underparts similar to *wuroi* but differs in being slightly more richly colored with the streaking of throat and upper breast averaging heavier and more distinct, giving an almost mottled effect in some specimens; and the upperparts being considerably darker and more olive. Compared with *despectus* it differs in the darker, more richly colored underparts, the darker and more brownish upperparts. Birds from the southern Snow Mountains, Weyland Mountains, and Wandammen Peninsula (*ferrugineus*) are more richly colored below and, while not so dark above, are much more brownish.

WING MEASUREMENTS: 6 males from type locality: 93, 95, 95, 96, 99, 100.

DISTRIBUTION.—Known from the Fly River area from its headwaters, on the west bank to Lake Daviumbu, on the east bank to its mouth (Gaima).

REMARKS.—There is some variation in specimens from one locality and an occasional specimen is much browner or much greener above than

the others. The underparts also vary somewhat; one of the four skins from above D'Albertis Junction has very little streaking on the throat.

The specimens from Lake Daviumbu and Sturt Island camp are somewhat paler below than the upper Fly River birds; one of the Sturt Island specimens approaches *despectus* in the greenness of its back, but is slightly darker above and richer colored below. The single adult male from Gaima is as pale as *wuroi* below; but the darkness of the olive-colored back places it with this form.

Pitohui incertus van Oort

Fly River, 30 miles above D'Albertis Junction: 1 ♂ ad.; August 12.

Fly River, 5 miles below Palmer Junction: 2 ♂ ad., 1 ♀ ad.; May 26–June 6.

Wing: ♂ ad. 115, 117, 118; ♀ ad. 109.

This species has hitherto been known only from the four specimens collected by Lorentz on the Noord River in 1907. (1909, Nov. Guinea, IX, p. 94.) The present specimens compare well with van Oort's description. In general appearance, in the shape of the bill, and in the stiffened feathers of the forehead this species is more nearly related to *Pitohui ferrugineus* than the other members of the genus. The male collected August 12 had enlarged testes. The stomachs of three of the birds contained insects.

Pitohui kirhocephalus brunneiceps (D'Albertis and Salvadori)

East bank Fly River, opposite Sturt Island: 1 ♂ ad.; October 7.

Fly River, 5 miles below Palmer Junction: 7 ♂ ad., 4 ♀ ad.; May 17–June 2.

Palmer River, 2 miles below Black River Junction: 4 ♂ ad., 2 ♀ ad.; June 8–July 26.

Wing: ♂ ad. (13) 116–128 (av. 121.4); ♀ ad. 117–122.

This series, from the type locality of *brunneiceps*, is very uniform, with the top of the head brown and the brown feathers of the throat more or less tipped with the fulvous color of the breast in both the male and female. In working out the collections of the 1933 New Guinea Expedition (1937, Bull. Amer. Mus., LXXIII, p. 181) Mayr and I had no material to compare with the southeast New Guinea birds and from a survey of the literature considered *meridionalis* Sharpe and *phaeocephalus* Reichenow as synonyms of *brunneiceps*. Now with additional material it is evident that this is incorrect. Two specimens labeled as males from Deva Deva have the top and sides of the head black and the throat black with the feathers tipped with the rufous color of the breast.

Four males from Chads Bay differ from the two Deva Deva birds in having the throat more extensively black, without any rufous tips to the feathers, and in the lighter, more brighter colored chestnut upperparts. A male from Mt. Cameron is similar to the Chads Bay specimens but is slightly darker on the back though not as much so as the Deva Deva birds. Mt. Cameron in the Owen Stanley Range is only a short distance from Deva Deva, so it is unlikely that the differences between these southeast New Guinea birds are geographical. A Milne Bay ♂ (= ♀ ?) is similar to *brunneiceps* but differs in the much lighter brown head, paler upperparts and underparts.

P. k. meridionalis (Sharpe) must be retained for the birds from opposite Yule Island eastward to East Cape and westward on the north coast a short distance to Chads Bay (Awaiama Bay).

Reichenow described *Rhectes phaeocephalus* from a single male from the Bailalla River. This specimen had a brown head. It was not compared with anything else so it is impossible to say whether it differs from *brunneiceps*, or from the female of *meridionalis*. Paludan (1935, Ornith. Monatsber., XLIII, p. 122) has recorded a specimen from the Gulf of Papua as *brunneiceps* but does not say whether or not he compared it with Fly River specimens.

***Aplonis mystacea* (O.-Grant)**

Fly River, 5 miles below Palmer Junction: 1 ♀ ad., 1 ♂ imm.; May 23.

Fly River, 2 miles below Black River Junction: 1 ♂ ad.; July 26.

Fly River, 30 miles above D'Albertis Junction: 1 ♂ ad., 1 ♂ imm.; August 8, 11.

Wing: ♂ ad. 103; ♂ imm. 97, 98; ♀ ad. 100, 103.

This species has been collected only twice before: three females on the Mimika River in 1910 (1915, Ibis, Jub. Sup. No. 2, p. 41) and seven males and a female on the Wanggar River in 1931 (1935, Mitt. Zool. Mus. Berlin, XXI, p. 190).

Compared with the series from the Wanggar River the present specimens have the culmen slightly less arched when viewed from the side.

***Oriolus flavocinctus mülleri* (Bonaparte)**

Bugi, 3 miles east of mouth of Mai Kussa River: 1 ♀; January, 1937.

This specimen probably belongs to this race which hitherto has been taken in New Guinea only on the Princess Marianne Straits (type locality).

***Lichmera indistincta ocularis* (Gould)**

Lake Daviumbu: 20 ♂, 1 ♀; August 22–September 30.

Wing: ♂ ad. 66–72; ♀ 61.

This is the second record for New Guinea of this species. Stresemann and Paludan, who recorded several specimens from Merauke (1935, Mitt. Zool. Mus. Berlin, XX, p. 460), noted that they were darker than *indistincta* from northern Australia but, lacking comparative material, suggested the New Guinea birds might be referred to the dark Aru Island form *nupta*. The present series is not as dark as a series of *nupta* but compares fairly well with a series from Melville Island and New South Wales. The latter series may average slightly darker with duller green edges to the remiges, and with a slightly browner tinge in the back. The brownish tinge on the upperparts may be the result of foxing and the other characters are too slight to use in separating these two populations. Stresemann has shown that Melville Island birds are indistinguishable from New South Wales specimens (1912, Nov. Zool., XIX, p. 344).

***Entomyzon cyanotis harterti* Robinson and Laverock**

Tarara: 3 ♂ ad., 1 ♂ imm., 4 ♀ ad.; December 7–January 19.

Penzara: 1 ♂ imm.; December 19.

Bangs and Peters have already recorded that Merauke specimens are similar to Cooktown specimens (1926, Bull. Mus. Comp. Zool., LXVII, p. 432). The Australian specimens available for comparison are slightly brownish on the throat and in the remiges and in the wing-coverts on the bend of the wing, probably due to "foxing"; but, allowing for this, the present series agrees rather well in color with North Queensland specimens except for the slightly darker fulvous on the inner edges of the remiges.

In size the south New Guinea birds are larger than Cape York birds, but birds from farther south, on the Barron River near Cairns, are as large and about the same in coloration.

The type of *connectens* Mathews from Inkermann should be included with the larger, darker form from New South Wales and Victoria.

WING MEASUREMENTS

<i>harterti</i>	MALE	FEMALE
South New Guinea	144, 151, 155	143, 148, 149, 152
Cape York	138, 139	136, 141, 144, 146
Cooktown	136	137, 140, 141
Barron River	155	150

<i>cyanotis</i>	MALE	FEMALE
Inkermann	156 (type of <i>connectens</i>)	
Dawson River	151	
New South Wales and Victoria	155, 156, 160, 166	152, 157, 158, 165, 166, 166

***Xanthotis chrysotis giulianettii* Mayr**

Fly River, 30 miles above D'Albertis Junction: 1 ♂, 1 ♀; August 11–12.

Fly River, 5 miles below Palmer Junction: 4 ♂, 3 ♀; May 18–26.

Palmer River, 2 miles below Black River Junction: 5 ♂, 4 ♀; June 12–July 16.

Wing: ♂ ad. (9) 101–108 (average 103.7).

This series agrees well with a series from Baroka, Kubuna, and Mafulu in southeast New Guinea.

***Xanthotis chrysotis saturation* (Rothschild and Hartert)**

Tarara: 8 ♂, 6 ♀; December 7–January 5, 1937.

Mabaduan: 2 ♂; April.

Daru: 1 ♂; April 2.

Gaima: 4 ♂, 7 ♀; November 10–22.

Fly River, east bank opposite Sturt Island: 14 ♂, 5 ♀; October 7–November 1.

Lake Daviumbu: 10 ♂, 4 ♀; August 21–September 27.

Wing: ♂ ad. (10) 100–106 (average 102.7).

The birds from the middle Fly River show a tendency toward *giulianettii* which occurs on the upper Fly. The range of this race includes the Aru Islands, south New Guinea from the east banks of the lower and middle Fly River and west to include the southern slopes of the Snow Mountains. *X. c. rubiensis* replaces it in the Weyland Mountains (Hartert et al., 1936, Mitt. Zool. Mus. Berlin, XXI, p. 198). Comparing a series from the Weyland Mountains with the present material the former are quite distinct in the slightly brighter coloration below, and the darker upperparts, especially the crown.

***Dicaeum geelvinkianum rubrigulare* D'Albertis and Salvadori**

Gaima: 4 ♂ ad., 2 ♀ ad.; November 13–22.

Lake Daviumbu: 1 ♂ ad.; September 16.

Fly River, 5 miles below Palmer Junction: 2 ♂ ad., 1 ♀ ad.; May 21–30.

Wing: ♂ ad. 50, 50, 52, 52, 52, 53, 53; ♀ ad. 47, 48, 49.

Compared with *rubrocoronatum* the males have the red of the upper breast much more extensive, and extending up onto the throat; the chin is whitish in all the males, but the size of this white area varies. It is least in the Lake Daviumbu bird and one from Palmer Junction. The rest of the underparts of this race are darker and the red of the crown is lighter.

This form was described (1879, Ann. Mus. Civ. Gen., XIV, p. 74) as characterized by the great extent of the red on the throat and the white chin. The type locality was 420 miles up the Fly River. Our specimens come from both above (Palmer Junction) and below (Lake Daviumbu) the type locality.

***Dicaeum geelvinkianum albopunctatum* D'Albertis and Salvadori**

Daru: 2 ♂ ad., 1 ♀ ad.; March 20–April 11.

Tarara: 1 ♂ ad.; December 20.

Penzara: 1 ♂ ad., 2 ♀ ad.; December 18–19.

Wing: ♂ ad. 53, 54, 54, 55; ♀ ad. 49, 50, 51.

A series from Daru and the Oriomo River collected by the 1933–1934 New Guinea Expedition give wing measurements of ♂ ad (19) 51–56 (average 53.4), ♀ ad. 51.

In working up the collection of the 1933–1934 Expedition Mayr and I considered the Daru and Oriomo River birds as *rubrigulare* (1937, Bull. Amer. Mus., LXXIII, p. 236). We assumed the birds from the upper Fly River to be the same. The present collection however shows that there are two races in this area. Birds from Daru, the Oriomo River, and west of the Wassi Kussa River differ from *rubrigulare* in the greater extent of the red of the upper breast and throat, which covers the chin. In a few specimens white feathers are mixed with the red feathers of the chin but most of these are just moulting into the red breast. This race also differs from *rubrigulare* in the paler abdomen, the slightly lighter red of the crown, and the slightly larger size. Although *albopunctatum* (known only from the type from the Katau River) was based on an apparently albinistic specimen, the type locality is within the range of this form and the name must be used.

Stresemann and Paludan (1935, Mitt. Zool. Mus. Berlin, XX, p. 462) recorded an immature male or a female from west of the upper Merauke River as *rubrocoronatum*. Probably it belongs to this form or the preceding. The very different *diversum* has been recorded from the Noord River (1914, Nova Guinea, IX, p. 98).

Lonchura leucosticta (D'Albertis and Salvadori)

Tarara: 1 ♂ ad., 2 ♀ ad.; December 10, 20.

Lake Daviumbu: 3 ♂ ad., 1 ♂ ? ad., 2 ♀ ad.; September 2-24.

Wing: ♂ ad. 49, 49, 50, 50; ♀ ad. 49, 50, 51.

The female differs from the male in being duller colored below, in having the breast slightly more spotted, and the brown of the back duller.

As Salvadori has pointed out this species is probably most closely related to *tristissima*. Since both species have a streaked and spotted plumage I at first wondered if *tristissima* could be a melanistic representative of *leucosticta*, but this is not the case. The bill is not very different, and the feet of both are slender, though the toes are longer in *leucosticta*. The tail and tail-coverts are similar in the two species, the longer upper tail-coverts being black and the central tail-feathers black and rounded at the tip, not pointed and fringed with yellow as in many other forms. In color pattern both birds are streaked on the head but there are important differences in pattern. In *tristissima* when there is a paling of the breast it indicates a pale breast band while in *leucosticta* the chin, and upper throat are paler, and in *tristissima* the light markings in the wing-coverts tend to form wing-bars, quite different from *leucosticta*. D'Albertis collected the type of this species 300 miles up the Fly in 1875 (1881, Ornith. Pap. Mol., II, p. 437). The next specimen, an immature male, was taken in 1934 near the Oriomo River by our 1933 Expedition (1937, Bull. Amer. Mus., LXXIII, p. 246). It was shot by a boy who said it was one of a large flock on the savanna.

On the 1936 Expedition, I was able to get the small series listed above and the following are my encounters with it.

TARARA

December 10.—A shooting boy brought in two which he said he had found in dry savanna near the forest edge.

December 20.—Brass found a party of six in the bamboos of a narrow, light line of shrubbery along a dry watercourse through the savanna.

LAKE DAVIUMBU

September 2.—Where an arm of an extensive swamp extended in between two forested ridges there was a stand of tall, scattered tea trees and tall, dense cane grass (the latter about twelve feet high) growing in the water. A party of six to eight of these birds appeared, perching on the stems of the cane grass and I was able to secure one before they disappeared.

September 4.—I had returned to camp when Brass sent me a note that he had located a flock of weaver birds. I went at once to investigate and found him watching a party of eight to ten of these birds feeding on the seeds of a clump of bamboos on a forested ridge, about eighty yards from where the forest edge gave way to marsh. One was shot and the rest disappeared through the forest. Earlier in the day Brass

had found two of this species in the grass fringe between the forest edge and a swampy lagoon, securing one of them.

September 24.—Rowing up the main part of the lake I found a flock of six or eight of this species and four or five of *Lonchura nevermanni* feeding in the half submerged low grass fringe of a garden island. The grass fringe was about ten yards wide, and on the island behind it was second growth and bamboo. I shot one of these weaver birds and the flock flew into the shrubbery, then down to the lake shore fifty yards, into the grass where I secured two more before the flock disappeared over the island.

Apparently this species favors the forest edges more than most other members of the genus. Several stomachs contained grass seeds; a female collected December 10 at Tarara was breeding.

***Lonchura stygia* Stresemann**

Lake Daviumbu: 24 ♂ ad., 1 ♂ imm., 7 ♀ ad., 4 ♀ imm.; August 20–September 26.

Wing: ♂ ad. (10) 50–55 (average 52.3); ♂ imm. 52; ♀ ad. (7) 50–54 (average 51.8); ♀ imm. 52, 52, 53, 53.

Worn specimens become brownish, but females are more brownish above and have slightly duller yellow upper tail-coverts than males in similar plumage. All the immature specimens have at least a few black feathers of the adult plumage coming in but one immature female with only a half dozen black feathers in the plumage allows the fresh immature plumage to be described. The upperparts are dark grayish brown slightly tinged olive, the sub-terminal portion of the feathers of the crown blacker giving a slightly spotted appearance; rump and upper tail-coverts tinged with rust; tail-feathers blackish, the central ones edged with pale yellow and much more rounded at the tip than in the adult; upper wing-coverts fuscous lightly edged with olive-gray; remiges brownish black, the outer edges with grayish margins, the inner edges margined with ochraceous, under wing-coverts ochraceous. The underparts are buffy gray, grayer on the chin, breast obscurely spotted with dusky; auriculars blackish brown with whitish shaft streaks, under tail-coverts mottled buffy white and black. The worn immature plumage is much paler.

This black weaver bird was discovered in the Mandum swamp near Merauke in 1933 by Dr. Nevermann who collected two males (Stresemann, 1934, O. M. B., XLII, p. 102). It was next found by Archbold's 1936 Expedition on Lake Daviumbu, where it was common.

While perhaps more characteristic of the reeds and floating mats of rice grass of the marshes, it also was fairly common in the tall grass of the savanna where the fruiting grasses offered food. It was a sociable

bird usually found in small flocks containing up to fifteen or twenty in number, and these sometimes mixed with feeding parties of *Lonchura nevermanni* and *Neochmia*. Once I saw a flock of twelve roosting on an isolated savanna tree on a ridge near the marsh where many swallows (*Petrochiledon*) were also roosting. It was typically lonchura-like in habits, feeding on the grass seeds in flocks; when alarmed the flocks kept together as they flew.

Of thirty-one adults collected in August and September three were in breeding condition. In September three nests were found. Probably the breeding season is prolonged and August and September are not in the height of the breeding season.

It is interesting to note that two breeding birds, one a laying female, were taken from a feeding flock of five birds, and only one or a pair of birds was seen in the vicinity of each nest. Apparently the birds retire from the flocks only for actual nest duties and join flocks some distance away for feeding, even when nesting is under way. The three nests were all in very similar situations, in the two or three foot high grass on little floating islets of grass on the edge of lagoons where they changed to marsh. These little islets were so loosely attached to the bottom that they could be turned by hand, and they were not solid enough for me to walk on them.

The nest found on September 19 was a lop-sided flask-shaped structure lying on its side, the top of the nest being straight, the lower edge curving up to the somewhat contracted "neck." It was simply supported by the dense grass amongst which it was built. It was a rather solid structure; the outside and body of the nest composed largely of dry, flat grass blades, and lined throughout, including the neck, with the dry heads of fruiting grass from which the seeds had been removed.

It measured outside 200 mm. long by 130 mm. deep by 110 mm. wide and the neck about 80 mm. across. Inside the nest chamber was about 80 × 80 mm. across, and the entrance 40 mm. across. The walls were from 20–30 mm. in thickness.

The other nests collected on September 12 and September 28 were similar in material, construction, and location, but one was more untidy and differently proportioned, being outside 180 mm. from entrance to back, and 200 mm. from top to bottom, giving a more globular flask shape.

Two nests contained four eggs, the other five. The eggs are ovate in shape, smooth in texture, and almost without gloss; white in color, unmarked.

The eggs measure as follows:

Set No. 1	Set No. 2
16.4 × 11	15.9 × 11.1
16.7 × 11	17.2 × 11.3
16.7 × 11.1	17.5 × 11.5
16.9 × 11.4	17.5 × 11.4

Before the eggs were laid two birds were sometimes seen about the nest sites, but later only a single bird. The adults flushed only when the nest was closely approached and then flew some distance and were then very difficult to collect. The male evidently takes part in incubation as on September 12 when visiting a nest the male flushed from it and was collected. It was the only bird in sight.

Two males with enlarged testes had the left testis somewhat slightly larger than the right.

***Lonchura nevermanni* Stresemann**

Lake Daviumbu: 11 ♂ ad., 10 ♀ ad., 3 (sex ?) ad.; August 19–September 29.

Wing: ♂ ad. (10) 49–54 (av. 52.5); ♀ ad. (10) 49–56 (av. 51.9).

There is some variation in the series of each sex but most females have the clear grayish white restricted to the forehead, the top of the head and nape having the feathers brown, tipped with grayish white though two specimens sexed as females resemble males; the upperparts average duller and the upper tail-coverts are paler than in males. Below the females average slightly paler. Occasional specimens of both sexes have a faint broken blackish line extending up the middle of the lower breast from the abdomen.

Dr. Nevermann discovered this species in 1933 at Merauke and Mapa, in south Dutch New Guinea (1935, Mitt. Zool. Mus. Berlin, XX, pp. 462, 463), and recorded that he found large flocks of brown weaver birds, probably this species, common in the grass country, along the coast and extending 70 km. inland between Merauke and Frederick Hendrik Island. He collected twelve specimens.

It was next found by our 1936 Expedition. About Lake Daviumbu, the only place we saw it, it was a common species of the tall reeds and the floating mats of rice grass of the marshes and lagoons, and the tall grass of the savanna near the lake and lagoons. Probably the habitat in which it feeds depends on where the grass is fruiting. It is typically *lonchura*-like in habits, feeding in couples or small parties, sometimes mixed with other grass-frequenting species such as *Neochmia* and *Lon-*

chura stygia or more often in parties of its own kind, occasionally up to twenty or thirty in number. The individuals of the flock rise together and fly some distance when alarmed.

While it feeds commonly in the marsh with *L. stygia*, it feeds on the tall densely grassed savanna more than does that species and probably nests on the savanna judging by the actions of a mated pair, the female ready to lay, which I collected on such a savanna ridge. This breeding pair collected on September 8 were the only birds of the twenty-four collected which were in breeding condition.